Chapter 12
Knowledge Interoperability among Parliaments and Government

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ABSTRACT

Parliaments possess huge amounts of valuable knowledge on public policies which concerns social needs, problems, and interventions for addressing them. This knowledge is highly useful to other parliaments and also to government agencies of various layers. However, this valuable knowledge is hidden in numerous text documents so that it cannot be efficiently exchanged and exploited. In this regard, it is highly important to extend the concept of interoperability among information systems (IS) of Parliaments and Government Agencies so that it covers not only the 'operational level', but also the 'knowledge level'. This paper presents a methodology for achieving higher level interoperability among IS of parliaments and government agencies with respect to the exchange of public policy related knowledge. It is based on the use of the complex problems representation ontology provided by the 'Issue-Based Information Systems' (IBIS) framework for codifying public policy related knowledge. An application of the proposed methodology is presented for the case of the law on the 'Contracts of Voluntary Cohabitation', which has been recently passed by the Greek Parliament. The evaluation of this application gave encouraging conclusions as to the usefulness of this methodology and resulted in the development of a refinement of the IBIS ontology.

INTRODUCTION

Parliaments are core institutions of modern democracies and possess huge amounts of valuable knowledge on public policies, which concerns the needs and problems of modern societies, possible interventions for addressing them (e.g., policies, measures, regulations) and also the advantages and disadvantages of each. This knowledge is highly useful to other Parliaments (e.g., of federal, state or local level, in the same country or even in a different country), in order to formulate their own policies, measures and regulations for various social needs and problems. It is also useful to Government Agencies of various layers: to Ministries, as it can assist them in designing and formulating their future policies, measures and legislation, and to lower layers of administration (e.g., Regional, Prefectural and Local Administrations), as it can assist them in enforcing the legislation effectively and proposing future improvements of it. However, this valuable public policy related knowledge of the Parliaments is hidden in numerous lengthy text documents, so it cannot be efficiently exchanged and exploited by other Parliaments and Government Agencies; this requires extensive mental processing, which includes reading numerous Parliamentary documents, filtering out the legalistic details and focusing on the public policy related content of them, identifying the social needs and problems addressed and the solutions provided for them, which make difficult and reduce the exchange and exploitation of knowledge. Recently Parliaments in many countries have started making big investments for developing large information systems (IS) for creating, storing and managing electronically various types of Parliamentary documents, and also for disseminating them to the general public through portals, enhancing transparency and public participation (Coleman, 2006; United Nations - Global Center for ICT in Parliament, 2008). In order to increase the effectiveness of these big investments it is necessary to exploit and disseminate better and more efficiently the valuable public policy related knowledge these documents contain. For this purpose it would be very useful to extend the concept of interoperability among the IS of Parliaments and Government Agencies, so that it covers not only the 'operational level', but also the 'knowledge level' as well, in order to enable the efficient exchange of not only data and functionality, but also of public policy related knowledge.

The achievement of IS interoperability, defined as the ability of IS and of the business processes they support to exchange data and to enable the sharing of information and knowledge (European Commission, 2004), has attracted much interest by both researchers and practitioners. However, most of the IS interoperability research and practice in government has been focused on the operational level (Guijaro, 2007; Charalabidis et al., 2008; Sourouni et al., 2008; Charalabidis et al., 2009; European Commission, 2004). Its main objective has been to enable the efficient delivery of complex integrated e-government services, which require the involvement of several Government Agencies, based on the 'electronic one-stop shop' model, and also to support inter-organizational exchange of data among Government Agencies at the operational level. The growing international administrative cooperation, as a result of growing internationalization of economic activity, has been an additional driver for the development of IS cross-border interoperability, aiming mainly to support the efficient cross-border exchange of data among similar Government Agencies of different countries, e.g., for the delivery of pan-European e-government services, or for the implementation of various European Union policies. On the contrary, there has been limited research and practice concerning the 'knowledge-level' interoperability among IS of Government Agencies, even though the capability to share not only data, but also knowledge as well, has been a major objective of IS interoperability, as shown by its abovementioned definition adopted by the European Union.

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